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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,086	03/01/2002	Denis Gallant	12494-US	9111

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EXAMINER	
TRAN, DZUNG D	

ART UNIT	PAPER NUMBER
2633	

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/085,086	GALLANT ET AL.	
	Examiner	Art Unit	
	Dzung D Tran	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 March 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,15, 16 and 17* is/are rejected.

7)☒ Claim(s) *13 and 14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *02/24/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what is "layer 2" on line 2 of the claim refers to. The specification on page 3, lines 23-24 indicated that light layer1 implies that the data signals are only handled at a bit level through the system but does not disclose what layer 2 is (see page 5, line 2 of specification).

3. Claims 5-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what is "the data signal" on lines 2-3 of claims refers to. For purpose of examination, examiner consider the data signal as an incoming signal that comprises header bytes and data bytes. However, the data signal will be modified by adding data bits or changing data bits or deleting data bits.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 5-12 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Bala et al. U.S. patent no. 6,272,154.

Regarding claim 1, Bala taught an optical switch comprising:

means for recovery a data rate from an incoming serial signal (254a of figure 2, e.g. , col. 6, lines 34-36);

means for monitoring signal quality of the incoming signal by monitoring the JO and B1 bytes of the SONET overhead signal (254a of figure 2, e.g. , col. 6, lines 43-44); and

means for providing data integrity across the transparent switching fabric by providing information on the identify and bit error rate (BER) of each signal (254a of figure 2, e.g. , col. 6, lines 445-47).

Regarding claim 2, Bala taught the transparent data path is independent of input data rate (col. 3, lines 15-17).

Regarding claim 8, Bala taught the transparent data path having means to extract layer 1 performance data from the incoming signal (e.g. CDR extract the SONET section trace over head bytes, col. 10, lines 51-53).

Regarding claim 9, as far as examiner understood, Bala taught the transparent data path having means to extract layer 1 and layer 2 performance data from the

incoming signal (e.g. CDR extract the SONET section trace over head bytes (e.g. layer 1) and the section BIP-8 violations (e.g. layer 2), col. 10, lines 51-53).

Regarding claim 10, Bala discloses transparent data path architecture having an active switching fabric plane and a back-up switching fabric plane (figure 2, col. 3, lines 21-22, col. 6, lines 29-33).

Regarding claim 11, Bala discloses the data and clock recovery (CDR) 254a, 254b connected to each of switch 255a, 255b for providing data integrity across the transparent switching fabric by providing information on the identify and bit error rate (BER) of each signal (col. 6, lines 45-47).

Regarding claim 12, Bala discloses means to select between said active switching plane and said back-up switching plane based on quality of data integrity between said switching fabric planes (col. 11, lines 36-65).

Regarding claim 15, Bala taught an optical switch comprising method of providing data integrity of serial data signal through a transparent data path architecture of an optical-electrical-optical (OEO) switch, the method comprising:

providing means to recover a data rate from said incoming serial data signal (col. 6, lines 34-36);

providing means to switch a signal across a switching fabric, the switching fabric including an active fabric and a back-up fabric (col. 6, lines 29-33) ;

monitoring signal quality of the incoming signal by monitoring the JO and B1 bytes of the SONET overhead signal (254a of figure 2, e.g. , col. 6, lines 43-44); and

providing data integrity across the transparent switching fabric by providing information on the identify and bit error rate (BER) of each signal and selecting the signal across respective switching fabrics having a higher signal quality (254a of figure 2, e.g. , col. 6, lines 445-47) and the transparent data path is independent of input data rate (col. 3, lines 15-17).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 3, 4, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bala et al. U,S. patent no. 6,272,154 in view of Halgren U.S. publication no. 2002/0105696.

Regarding claims 3 and 16, as per claims above, Bala discloses all the limitations except for switching an incoming signal independent of data protocol. Halgren discloses a transparent optical –electrical-optical switch for switching an incoming signal independent of data rate (page 2, paragraph 0025) and data protocol (page 2, paragraph 0027). Since today optical communication network is lager (e.g. transmit optical signal over different data rate, for example OC-3, OC-12, OC-48) and interface with different data protocol (e.g. Ethernet, ATM, SONET and SDH protocols). At the time of the invention was made, it would have been obvious to a person of ordinary skill

in the art to provide multi-protocol data recovery in Bala invention since it is desirable to accommodate and interface with the growing number of optical fiber communication system use different protocols and different rates for increase flexibility and complexity of service.

Regarding claim 4, Bala taught a data and clock recovery (CDR) circuits 235a, 235b for recovering a data rate from an incoming signal is capable of recovering a data rate from a wide range of data rates (e.g. OC-3, OC-12 or OC-48) see col. 6, lines 39-42.

Regarding claim 17, Bala taught an optical switch comprising:

means for recovery a data rate from an incoming serial signal (254a of figure 2, e.g. , col. 6, lines 34-36);

means for extracting layer 1 and 2 performance data from the signal in a non-intrusive manner (col. 10, lines 51-53);

means for monitoring signal quality of the incoming signal by monitoring the JO and B1 bytes of the SONET overhead signal (254a of figure 2, e.g. , col. 6, lines 43-44); and

means for providing data integrity across the transparent switching fabric by providing information on the identify and bit error rate (BER) of each signal (254a of figure 2, e.g. , col. 6, lines 445-47). Bala differs from claim 17 of the present invention in that Bala does not disclose means for switching any signal, independent of data protocol. Halgren discloses a transparent optical -electrical-optical switch for switching a signal independent of data protocol (page 2, paragraph 0027). At the time of the

invention was made, it would have been obvious to a person of ordinary skill in the art to provide multi-protocol data recovery in Bala invention since it is desirable to accommodate and interface with the growing number of optical fiber communication system use different protocols and different rates for increase flexibility and complexity of service.

8. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bala et al. U.S. patent no. 6,272,154.

Regarding claims 5-7, as far as examiner understood, Bala discloses cross connect switch 255 for switching a signal across said switch **without modifying the data signal** (e.g. by monitoring the J0 and B1 bytes of the SONET overhead data and confirming the operation of the cross connect; col. 6, lines 21-33, 34-46. Thus, if it is not inherent, it would have been obvious that by monitoring the changing of the J0 and B1 bytes of the SONET overhead data and confirming the operation of the cross connect, Bala's reference does not adding data bit or changing data bits or deleting data bits. Furthermore, this supporting rational is based on a recognition that the claimed difference exist not as a result of an attempt by applicant to solve a problem but merely amounts to selection of expedients known to the artisan of ordinary skill as design choices.

9. Claims13 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. McKenzie et al. U.S. patent no. 6,693,904. Trace format for a sliced switch fabric

b. Boduch et al. U.S. patent no. 6,667,954. Method and apparatus for selecting the better cell from redundant streams within a cell oriented environment

c. Yoshifuji et al. US patent no. 6,771,907. Optical ring system

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dzung Tran
03/02/2005

Dzung tran